

REMARKS

Applicants thank the Examiner for the thorough examination given the present application.

Status of the Claims

Claims 1-5 and 7-15 are pending in the above-identified application. Support for the amendment to claim 1 can be found in the present specification, *inter alia*, at page 15 and Example 1. Claims 13-14 are amended to provide proper antecedent basis. Thus, no new matter has been added. Based upon the above considerations, entry of the present amendment is respectfully requested.

In view of the following remarks, Applicants respectfully request that the Examiner withdraw all rejections and allow the currently pending claims.

Specification

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. Specifically, the Examiner notes that claim 1 claims an external quantum efficiency of up to 100%, while over 15.8% is not disclosed. Applicants respectfully traverse in view of the amended claims.

Claim 1 is amended to recite an upper limit of 15.8%. As such, Applicants respectfully submit that the amendment overcomes the outstanding objection and that the objection should be removed.

Claim Objections

Claim 1 is objected to for a typographical error. Claims 13-14 are objected to for lacking antecedent basis. Applicants respectfully traverse in view of the amended claims.

Claims 1 and 13-14 are amended to overcome these issues. Accordingly, Applicants respectfully request that the objection be removed.

Issues under 35 U.S.C. § 112, first paragraph

Claims 1-5 and 7-15 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Specifically, the Examiner notes the limitations “R¹⁰⁴ and R¹⁰⁹ do not represent a bromine atom” and “external quantum efficiency of the device is 6% or more” are not supported or enabled by the present specification. Applicants respectfully traverse in view of the amended claims.

Claim 1 is amended to overcome these issues. As noted above, these limitations are fully supported and enabled by the present specification. As such, Applicants respectfully request that these rejections be removed.

Issues under 35 U.S.C. § 103

1) Claims 1-5 and 7-12 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Sato et al. ‘418 (US 2003/0218418).

2) Claims 13-14 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Sato et al. ‘418 in view of Akiyama et al. ‘589 (US 2002/0146589).

3) Claim 15 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Sato et al. ‘418 and Akiyama et al. ‘589 in view of Forrest et al. ‘360 (US 6,310,360).

Applicants respectfully traverse, and reconsideration and withdrawal of these rejections are respectfully requested.

Legal Standard for Determining Prima Facie Obviousness

MPEP 2141 sets forth the guidelines in determining obviousness. First, the Examiner has to take into account the factual inquiries set forth in *Graham v. John Deere*, 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), which has provided the controlling framework for an obviousness analysis. The four *Graham* factors are:

- (a) determining the scope and content of the prior art;
- (b) ascertaining the differences between the prior art and the claims in issue;
- (c) resolving the level of ordinary skill in the pertinent art; and
- (d) evaluating any evidence of secondary considerations.

Graham v. John Deere, 383 U.S. 1, 17, 148 USPQ 459, 467 (1966).

Second, the Examiner has to provide some rationale for determining obviousness. MPEP 2143 sets forth some rationales that were established in the recent decision of *KSR International Co. v Teleflex Inc.*, 82 USPQ2d 1385 (U.S. 2007).

As the MPEP directs, all claim limitations must be considered in view of the cited prior art in order to establish a *prima facie* case of obviousness. See MPEP 2143.03.

Distinctions over the Cited References

As amended, independent claim 1 recites that “an external quantum efficiency of the device is 6% to 15.8%.”

As the Examiner admits, Sato et al. ‘418 fail to disclose the external quantum efficiency. However, the Examiner still asserts that the present invention is obvious over Sato et al. ‘418. Applicants respectfully assert that Sato et al. ‘418 do not disclose an organic electroluminescent device having an external quantum efficiency in the claimed range of 6% to 15.8%.

In order to demonstrate this difference, enclosed herewith is a 37 CFR § 1.132 Declaration of Toshihiro Ise. The Examiner is respectfully requested to review the enclosed Declaration of Toshihiro Ise as it provides strong evidence of the patentability of the present invention.

In the enclosed Declaration, the external quantum efficiency of Sato et al. ‘418 is shown to be 2.8%, which is far lower than the external quantum efficiency range of the present invention (6% to 15.8%). In fact, one of ordinary skill in the art would find it difficult to improve the external quantum efficiency of the electroluminescent device to 6% or more based on the disclosure of Sato et al. ‘418.

As discussed above, Sato et al. ‘418 do not disclose each and every aspect of claim 1, from which all other claims ultimately depend. Applicants respectfully submit that Akiyama et al. ‘589 and Forrest et al. ‘360 do not overcome the deficiencies of this reference.

To establish a *prima facie* case of obviousness of a claimed invention, all of the claim limitations must be disclosed by the cited references. As discussed above, Sato et al. '418, with or without Akiyama et al. '589 and Forrest et al. '360, fail to disclose all of the claim limitations of independent claim 1, and those claims dependent thereon. Accordingly, the combinations of references do not render the present invention obvious.

Furthermore, the cited references or the knowledge in the art provide no reason or rationale that would allow one of ordinary skill in the art to arrive at the present invention as claimed. Therefore, a *prima facie* case of obviousness has not been established, and withdrawal of the outstanding rejections is respectfully requested. Any contentions of the USPTO to the contrary must be reconsidered at present.

CONCLUSION

A full and complete response has been made to all issues as cited in the Office Action. Applicants respectfully request that a timely Notice of Allowance issue for the present case clearly indicating that each of claims 1-5 and 7-15 are allowed and patentable under the provisions of title 35 of the United States Code.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Chad M. Rink, Reg. No. 58,258 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

By 

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Attachment: 37 CFR § 1.132 Declaration of Toshihiro Ise